

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A conductive ball comprising:

a core ~~(4)~~ formed in a generally spherical shape and formed of a nonmetallic material; and

a coating layer coating a surface of the core and having at least a first metal layer ~~(2)~~ and a second metal layer ~~(3)~~, wherein,

the first metal layer ~~(2)~~ is made of a first alloy containing Sn and having noneutectic composition, and

the second metal layer ~~(3)~~ is made of a second alloy containing at least either Cu or Ni.

2. (Original) The conductive ball as defined in Claim 1, wherein

the first alloy has composition in which a liquidus temperature rises when a proportion of Sn in composition decreases.

3. (Original) The conductive ball as defined in Claim 2, wherein

the first alloy has composition closer to eutectic composition than to composition whose constituent forms an intermetallic compound.

4. (Original) The conductive ball as defined in Claim 2, wherein

the first alloy has composition in which a liquidus temperature is 240 °C or higher.

5. (Original) The conductive ball as defined in Claim 2, wherein
the first alloy has composition in which a liquidus temperature is 260 °C or higher.
6. (Original) The conductive ball as defined in Claim 1, wherein
the first alloy contains Ag, and a proportion of the Ag in composition is larger than
3.5 weight %.
7. (Original) The conductive ball as defined in Claim 1, wherein
the first alloy contains Ag, and a proportion of the Ag in composition is 4 weight %
or larger.
8. (Original) The conductive ball as defined in Claim 1, wherein
the first alloy contains Ag, and a proportion of the Ag in composition is 5.5 weight %
or larger.
9. (Original) The conductive ball as defined in Claim 5, wherein
in the first alloy, a proportion of the Ag in composition is smaller than 75 weight %.
10. (Original) The conductive ball as defined in Claim 5, wherein
in the first alloy, a proportion of the Ag in composition is 37 weight % or lower.
11. (Original) The conductive ball as defined in Claim 5, wherein

in the first alloy, a proportion of the Ag in composition is 6.5 weight % or lower.

12. (Currently Amended) A formation method for an electrode of an electronic component comprising:

disposing the conductive ball ~~(1)~~ as defined in Claim 1 on a land ~~(6)~~ of an electronic component ~~(5)~~; and

heating the conductive ball ~~(1)~~ disposed on the land ~~(6)~~ of the electronic component ~~(5)~~, wherein

a maximum temperature for heating the conductive ball ~~(1)~~ is a liquidus temperature of the first alloy or lower.

13. (Currently Amended) A formation method for an electrode of an electronic component comprising:

disposing a joint member ~~(13)~~ containing a third alloy on at least either the conductive ball ~~(1)~~ as defined in Claim 1 or a land ~~(6)~~ of an electronic component ~~(5)~~;

disposing the conductive ball ~~(1)~~ on the land ~~(6)~~ of the electronic component ~~(5)~~;
and

heating the conductive ball ~~(1)~~ and the joint member ~~(13)~~, wherein

a maximum temperature for heating the conductive ball ~~(1)~~ and the joint member ~~(13)~~ is a liquidus temperature of a first alloy of the conductive ball ~~(1)~~ or lower, and is a liquidus temperature of a third alloy of the joint member ~~(13)~~ or higher.

14. (Currently Amended) A formation method for an electrode of an electronic component comprising:

attaching flux ~~(7)~~ to at least either the conductive ball ~~(1)~~ as defined in Claim 1 or a land of an electronic component ~~(5)~~;

disposing the conductive ball ~~(1)~~ on the land ~~(6)~~ of the electronic component ~~(5)~~;

and

heating the conductive ball ~~(1)~~, wherein

the flux ~~(7)~~ contains 0.2 weight % or more halogen.

15. (Currently Amended) An electronic component having an electrode ~~(8)~~ using the conductive ball ~~(1)~~ as defined in Claim 1.

16. (Currently Amended) An electronic component having an electrode ~~(8)~~ formed by the formation method for an electrode as defined in Claim 12.

17. (Currently Amended) An electronic component having an electrode ~~(8)~~ formed by the formation method for an electrode as defined in Claim 13.

18. (Currently Amended) An electronic component having an electrode ~~(8)~~ formed by the formation method for an electrode as defined in Claim 14.

19. (Original) Electronic equipment including the electronic component as defined in Claim 15.

20. (Original) Electronic equipment including the electronic component as defined in

Claim 16.

21. (Original) Electronic equipment including the electronic component as defined in

Claim 17.

22. (Original) Electronic equipment including the electronic component as defined in

Claim 18.